Causes for Gasoline & Diesel Price Increases in California

AUGUST MONTHLY UPDATE

California Energy Commission

Aug 1, 2003

CAUSES FOR GASOLINE AND DIESEL PRICE INCREASES IN CALIFORNIA

Summary

On March 13, 2003, Governor Davis asked the California Energy Commission (Energy Commission) to investigate the causes for the rapid rise in gasoline and diesel prices in February and March. Following submission of its report on March 28, 2003, the Governor asked the Energy Commission to provide monthly updates. This report presents the Energy Commission's August 2003 update.

In July, two California refineries experienced unplanned outages. Because they were relatively small, these outages have not had the major impacts on diesel and gasoline prices that resulted from outages earlier this year.

Average wholesale and retail diesel prices increased during the month of July. Refiners' concentration on gasoline production and a lack of diesel imports caused sharp declines in diesel inventories. Reduced inventories contributed to wholesale and retail diesel price increases since the end of June. Average retail diesel prices increased from $1.60 per gallon on June 30 to $1.67 on July 28.

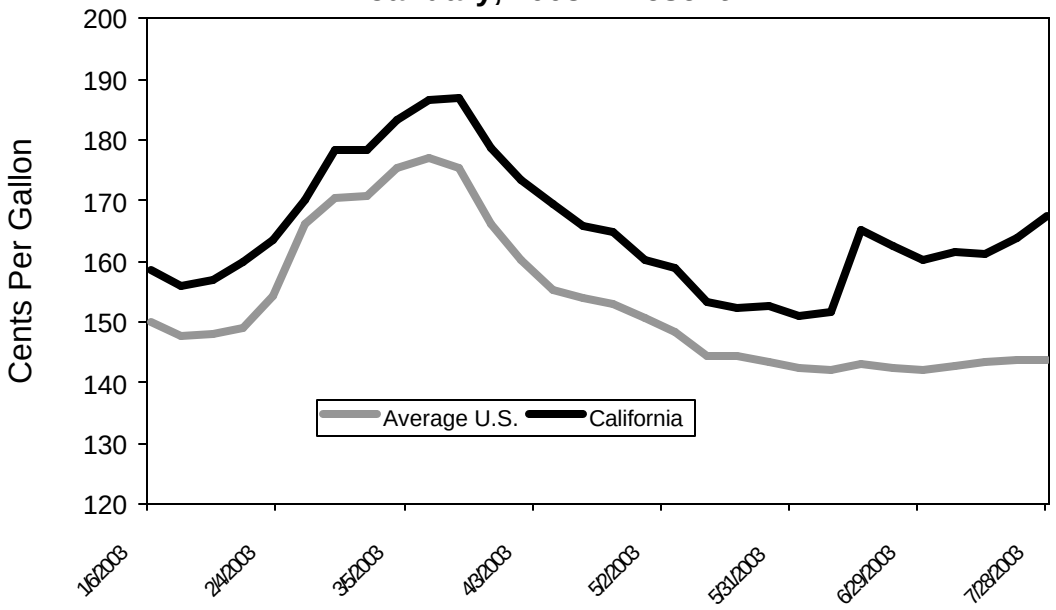
In contrast, wholesale and retail gasoline prices declined overall during July, despite the recent refinery outages. These declines are due to increases in gasoline production, imports and storage compared to June that have occurred in response to high gasoline prices. As of July 28, average retail regular gasoline prices were $1.71 per gallon, down from $1.80 on June 30. As a result of these trends, diesel and regular gasoline in California during July have converged much closer to the historical pattern of more nearly equal prices.

Since late May, world crude oil prices have remained relatively high due to low U.S. crude oil inventories and the slow return of Iraqi oil production. As of July 25, the price of Alaska oil delivered to California was $28.62, nearly unchanged from June 30.

Recent California Diesel Fuel Prices

Figure 1 compares retail diesel prices in California with the U.S. average price through July 28, 2003[1].

Figure 1
Retail Diesel Prices - California vs. U.S.
January, 2003 - Present



As reported last month, several unplanned refinery outages in June temporarily reduced diesel production in the state, causing a sharp increase in diesel prices. Industry responded by raising diesel production and increasing distillate imports, causing diesel prices to decline through late June. In early July, refiners' concentration on gasoline production and a lack of imports cut deeply into distillate inventories, causing California retail diesel prices to rise slowly in response. Additional refinery problems later in July exacerbated this trend. From a June 30 price of $1.60 per gallon, prices rose to $1.67 on July 28, widening the disparity between state and national diesel prices.

Recent California Gasoline Prices

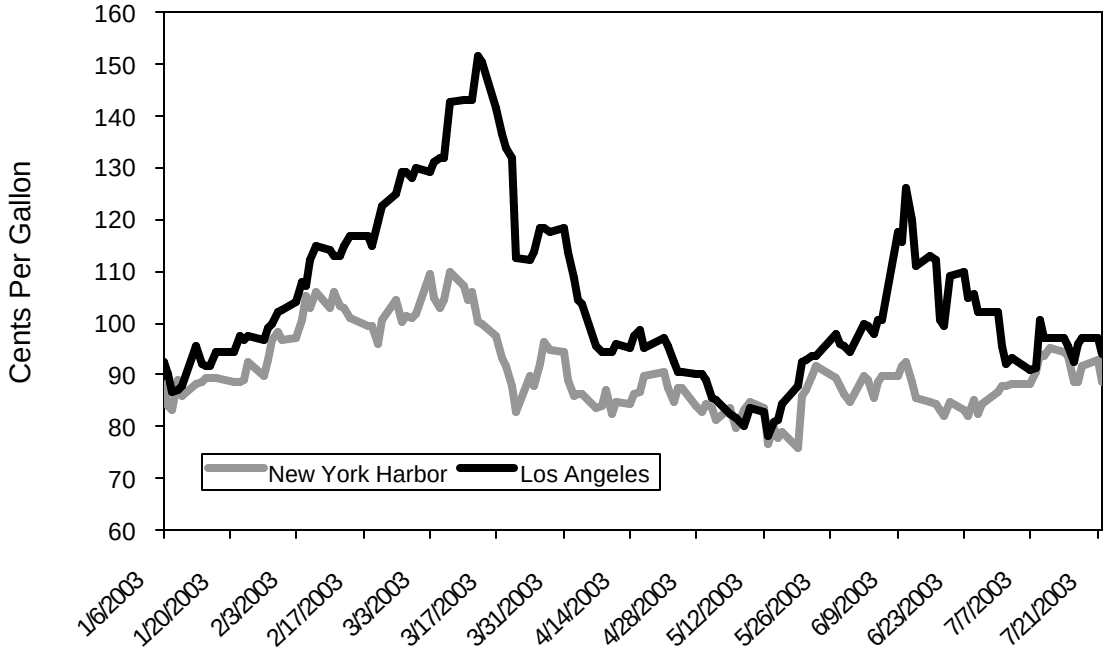
Figure 2 compares Los Angeles wholesale gasoline prices with New York prices through July 22, 2003.

Following the series of outages and maintenance difficulties that contributed to the March 2003 price spike, all of California's gasoline-producing refineries were fully operational by mid-April 2003. During May and June, however, a new round of unscheduled refinery outages put significant upward pressure on wholesale gasoline prices in California. But, by the beginning of July, all refineries had returned to full production, and wholesale regular reformulated gasoline prices in the state fell below $1 per gallon. Wholesale prices increased briefly in early July

and again later in the month as a result of outages at two California refineries and another in Washington.

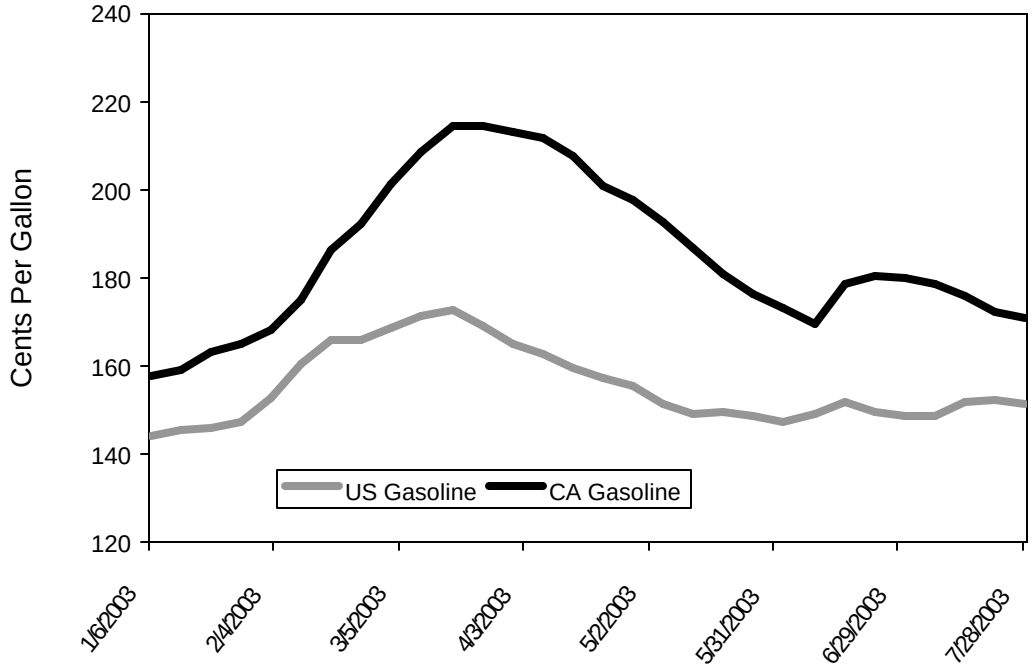
Refinery outages in July, in contrast to May and June, were not nearly as severe or numerous. As a result, gasoline production, imports and inventories in July increased compared to June, and wholesale gasoline prices generally declined. The Los Angeles wholesale regular gasoline price as of July 22 was $0.94 per gallon, down from $1.02 on June 30. The differential between Los Angeles and New York wholesale gasoline prices also has substantially narrowed to more normal levels compared to earlier this year.

Figure 2
Wholesale Gasoline Prices - Los Angeles vs. New York
January, 2003 - Present



In California, retail gasoline prices have been slowly declining, compared to June, because refinery outages in July had less impact on gasoline production. Figure 3 compares retail regular grade gasoline prices in California with the U.S. averages through July 28, 2003. Following the March 17 peak of $2.15 per gallon, the average California gasoline price declined steadily to $1.70 on June 9. The spate of California refinery outages in June significantly reduced gasoline production and raised retail gasoline prices through the end of June. This increased the incentive to produce and import gasoline. As a result, even with new refinery outages in July, gasoline stocks increased compared to June and retail gasoline prices declined through the month. As of July 28, 2003, the average price of California regular grade gasoline was $1.71 per gallon, down from $1.80 reported on June 30.

Figure 3
Retail Gasoline Prices - California vs. U.S. All Formulations
January, 2003 - Present



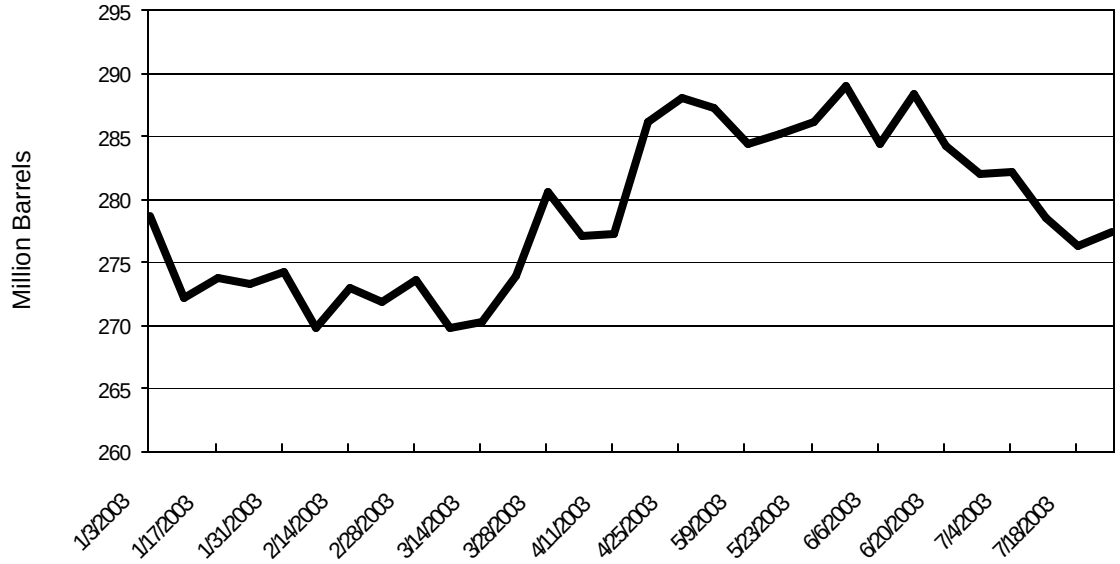
Crude Oil Inventories

U.S. crude oil inventories fell to a 27-year low of approximately 270 million barrels in March of 2003. Inventories increased modestly to nearly 290 million barrels during June, but declined to just over 277 million barrels as of July 25 (see Figure 4). The recent decline is due largely to the slow pace of rebuilding Iraqi oil exports. Current inventories are about 10% below the level of crude inventories in the U.S. one year ago.

Crude Oil Prices

As a result of low inventories, crude oil prices remain stuck at fairly high levels. Alaska North Slope (ANS) crude oil prices traded within a fairly narrow range of $28-30 per barrel through July. As of July 25, ANS crude cost $28.62 per barrel, nearly unchanged from the end of June. Crude oil prices are a primary determinant of gasoline and diesel prices.

Figure 4
U.S. Crude Oil Inventories
January 3, 2003 through July 25, 2003

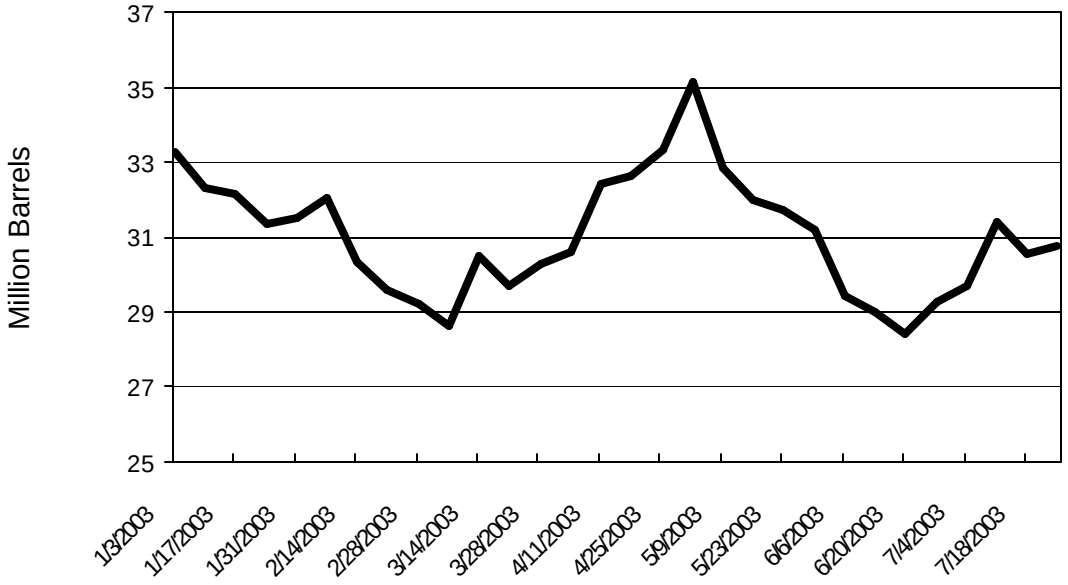


Gasoline Inventories

Figure 5 displays total finished gasoline and gasoline blendstock inventories for PADD 5.[2] Increased production and imports during July appear to have substantially rebuilt gasoline inventories lost during the round of refinery outages experienced in June. Increasing inventories indicate that supply is more than adequate to satisfy demand, and they can be drawn down as needed during future shortages.

From an early May peak of 35 million barrels, West Coast inventories declined sharply to 28.4 million barrels as of June 20, but have since risen to 30.8 million barrels as of July 25, 2003.

Figure 5
EIA PADD 5 Gasoline & Blendstock Inventories
January 3, 2003 through July 25, 2003



California Fuel Costs and Apparent Margins

Tables 1 and 2 break out the cost components of a typical gallon of gasoline and diesel, respectively, for July 2002, July 2003 and all years since 1997.[3] After netting out all taxes and crude oil costs, the bottom two rows of both tables display the implied refining and distribution margins.[4] "Refiner Costs and Profits" are the returns to refiners inclusive of all production costs other than the cost of crude oil.[5] "Distribution Costs, Marketing Costs, and Profits" are the returns to petroleum marketers and distributors who transport petroleum product from distribution terminals to retail stations and also include all transportation costs.[6]

Table 1
California Gasoline Cost Analysis

	Branded Gasoline			Unbranded Gasoline		
	July 2003	**July 2002**	**1997 - Present**	**July 2003**	**July 2002**	**1997 - Present**
Retail Prices	1.74	1.60	1.49	1.74	1.60	1.49
Federal Excise Tax	0.18	0.18	0.18	0.18	0.18	0.18
State Excise Tax	0.18	0.18	0.18	0.18	0.18	0.18
State and Local Sales Tax	0.13	0.12	0.11	0.13	0.12	0.11
Crude Oil Cost	0.70	0.62	0.52	0.70	0.62	0.52
Refiner Costs and Profits	**0.46**	**0.43**	**0.39**	**0.32**	**0.28**	**0.34**
Distribution Costs, Marketing Costs, and Profits	**0.09**	**0.07**	**0.11**	**0.23**	**0.22**	**0.16**

Table 2
California Diesel Cost Analysis

	Branded Diesel			Unbranded Diesel		
	July 2003	**July 2002**	**1997 - Present**	**July 2003**	**July 2002**	**1997 - Present**
Retail Prices	1.63	1.43	1.45	1.63	1.43	1.45
Federal Excise Tax	0.24	0.24	0.24	0.24	0.24	0.24
State Excise Tax	0.18	0.18	0.18	0.18	0.18	0.18
State and Local Sales Tax	0.11	0.09	0.09	0.11	0.09	0.09
Crude Oil Cost	0.70	0.62	0.52	0.70	0.62	0.52
Refinery Costs and Profits	**0.27**	**0.15**	**0.26**	**0.27**	**0.14**	**0.26**
Distribution Costs, Marketing Costs, and Profits	**0.13**	**0.15**	**0.16**	**0.13**	**0.16**	**0.16**

Petroleum Industry Information - Response to Information Requests

In our March 28 report to the Governor, the Energy Commission identified inadequacies in the scope of data we currently collect from the industry and discussed the need to broaden our existing data-collection efforts. A more detailed and frequent level of data collection will improve the Energy Commission's ability to assess and respond to petroleum issues.

To address the need for better data, the Energy Commission adopted an Order Instituting Rulemaking (Order No. 03-0219-08; Docket No. 03-SB1962-1) in

February 2003. During the rulemaking process, proposed regulations will be subject to public review and comment. We expect the rulemaking to be complete by early 2004.

However, the Energy Commission remains concerned about the potential for supply problems during the remainder of the 2003 summer driving season because there are two different and non-fungible formulations of California gasoline in the market place. Thus, as an interim measure, the Energy Commission and industry have been working cooperatively to develop data-reporting requirements that will be in effect until we can complete the formal rulemaking. These requirements will include new weekly, monthly and annual data, including dealer tank wagon prices.

Note that at this time, Assembly Bill 1340 (Kehoe; amended June 17, 2003) Petroleum: Information Reports, restates existing Energy Commission authority under our PIIRA statutes. However, the bill expressly lists weekly reporting requirements and dealer tank wagon prices while we believe these are implicitly authorized by existing law.

Distribution Imbalance Protocols

The Energy Commission, in conjunction with the California Air Resources Board (CARB), have been jointly developing a set of protocols that would allow the commingling of different types of gasoline during the summer months if temporary supply imbalances occur.

This one-year program was designed as a safety valve to be used during the transition away from MTBE. Since some refiners elected to transition in advance of Governor Gray Davis' deadline of December 31, 2003, the California gasoline market contains multiple types of gasoline (some blends contain ethanol and some blends contain MTBE). These two different types of gasoline are not permitted to be mixed during the summer months due to concerns about increased evaporative emissions (air pollution). The protocols are intended to allow this type of mixing under certain conditions and to assure that first responders (fire, police, and ambulance) can obtain an adequate supply of gasoline.

The Energy Commission implemented protocols during July 24 for the first time. After determining that there was a temporary distribution imbalance in the Sacramento Valley region for a major independent marketer, the Energy Commission consulted with CARB to finalize the conditions under which commingling could occur. These conditions included the delivery of gasoline blended with ethanol to cardlock facilities that are the sole source of supply for a number of first responders. Delivery to service stations of the different type of gasoline would only be permitted if the location were also the sole source for a

first responder. An additional condition required that mid-grade dispensers be temporarily disabled at those locations that used dispensers that created mid-grade by combining regular and premium grades. These conditions were designed to ensure that first responders would still be able to obtain sufficient supplies of gasoline to continue their operations on an uninterrupted basis and to minimize any potential detrimental impacts on air quality.

[1] All gasoline and diesel price data are provided by the U.S. Energy Information Administration (EIA).

[2] EIA publishes weekly gasoline inventories only by Petroleum Area Defense District (PADD), not by state. Since California comprises over 70 percent of PADD 5, the changes in the level of this data series (Figure 5) are good proxy for California.

[3] The following data sources were used in preparing the tables 1 and 2; diesel and gasoline branded and unbranded rack prices are provided by OPIS, all retail prices are provided by EIA, and ANS crude oil prices are provided by the Wall Street Journal.

[4] Most branded retail gasoline stations are operated by franchise dealers who must purchase their gasoline from a major branded refiner at the dealer tank wagon (DTW) price. DTW prices are determined by the branded refiners and include all delivery costs. Because the "Distribution and Marketing Costs" in the table below are derived from terminal rack prices and not DTW prices, an actual dealer margin, inclusive of costs and profits, cannot be inferred. Since the Energy Commission does not collect DTW prices, we cannot confirm the extent to which DTW prices differ from OPIS branded rack prices.

5 "Refiner Costs and Profits" includes all non-crude oil costs associated with refining and terminal operation, crude oil processing, oxygenate additives, product shipment and storage, oil spill fees, depreciation, purchases of gasoline to cover refinery shortages, brand advertising, and profits. The component is calculated as the difference between the Oil Price Information Service (OPIS) average rack price of gasoline and crude oil cost.

[6] "Distribution Costs, Marketing Costs, and Profits" includes all costs associated with the distribution of petroleum product from distribution terminals to the ultimate retail consumer. These costs include: franchise fees, and/or rents, wages, utilities, supplies, equipment maintenance, environmental fees, licenses, permitting fees, credit card fees, insurance, depreciation, advertising, and profits.